LUBE OIL SAMPLE

Health: Green, Last Calc: 04/26/2020 04:04, Power: 100%, Trail Only: No MAINT ALERTS **ECZ** EXAM M-ALERT CLAIMS DEPT MECH INSP REQUEST-6423307(Yellow) Defect Information Yellow, 04/23/2020 21:53, PWR:100%, TO:Y, Src:UPM, Cnst:, Tmp:, Rep:N Function: MAINTENANCE ALERT Behavior: CLAIMS DEPT MECH INSP REQUEST Failure Mode COMPLETE LMI 9429 MECHANICAL INSPECTION REPO Defect Comments Initial: The Risk Management Group will need an LMI 9429 completed on this unit. It was involved in an incident at MP 14.82 of the Proviso Yard... RMCC 2020-04-23-059NWE....ggl OTHER WORK WCH INSPECT COOLING WATER COLOR **ECZ EXAMINE SPECIAL INSTRUCTIONS** 10/04/2017 TJZ "This locomotive is not alerter equipped. If used as controlling locomotive, locomotive cannot operate at speeds in excess of 25mph." SERVICE TRACK:SV PIT WCH RECORD WHEEL MEASUREMENTS Standard Work Task WCH Setup 1. 1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220 for further instruction. Close steps 1, 2, and 3 on the task. 2.1) Inspect EWG. Determine there are no defects and perform the job safely. Press Forward and Backward keys at the same time. 3) Check battery level . Check battery charge on LCD display 4.1) Set-up EWG. Select "System Setup" 4.2) Select "Time and Date" 4.3) Press back arrow. Return to "System Setup" 4.4) Select "System Setup" 4.5) Select "Chng Operator" 4.6) Press back arrow. Return to "System Setup" 4.7) Select "System Setup" 4.8) Select "Chng Location" 4.9) Press back arrow twice. Return to main menu WCH Locomotive information set-up 2. 1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220 for further instruction. Close this step on the task. 2.1) Enter Locomotive information. Select "Record Manager" 2.2) Select "Add Record" 2.3) Enter unit initials (ie. UP or UPY) and select enter 2.4) Enter unit number (####) and select enter 2.5) Enter number of axles and select enter 2.6) Press back arrow twice Return to main menu 3.1) Prepare to collect measurements on EWG. Select "Collect Data" Prepare gauge to record wheel measurements 3.2) Select "Record Selection" 3.3) Select Locomotive ID number 3.4) Select "Wheels" 3.5) Select first wheel to measure (i.e. L1) WCH Record wheel measurements 1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220

### SERVICE TRACK:SV PIT

- 3. for further instruction. Close this step on the task.
  - 2) Inspect wheel. Check for Defects, refer to LMI 5202 Record defects as found
  - 3.1) Take wheel measurements. Place EWG on inner rim of wheel
  - 3.2) Press button on EWG. EWG will measure rim thickness, flange thickness and flange height
  - 3.3) Wait for audible indicator, long beep
  - 3.4) Press button on EWG
  - 3.5) Place EWG on outer rim of wheel
  - 3.6) Press button on
  - 3.7) Wait for audible indicator, long beep
  - 4) Repeat steps 3.1-3.7 for the remaining wheels
  - 5) Up load wheel measurements on computer. Place wheel gauge next to receiver attached to computer
- 4. Provide Wheel Measurements

1) If using W600-1A Wheel "Finger" Gauge then refer to LMI 5220

for further instruction. Close this step on the task.

- 2) Open Mini EWG Computer Program. At the MCS work station, click on Start and select "Programs / Mini EWG Download / Mini EWG Download"
- 3) Upload Wheel Measurements from EWG to PC. Place EWG
- in front of IR Port
- 4) From Main Menu on EWD LCD, select "Connect to PC" using navigational keys. When connection between computer and EWG is made, LCD display on EWG will display "Connected to PC"
- 5) Select "Download" in Mini EWG computer program
- 6.1) Verify download is complete. Download is complete when wheel measurement record is displayed on computer screen
- 6.2) Close Mini EWG Program
- 7) Review the wheel report for the wheel measurements uploaded. wheel report is updated if the date, time, and operator initials are correct

WCH

4/26/2020 3:36:10PM

### Fill in all answers for questions reparding this task.    Reason for Report[PERSONAL INJURY   BECZ   BIH     Reason for Report[PERSONAL INJURY   BIH     Reason for Report[PERSONAL INJURY   BIH     Reason for Report[PERSONAL INJURY   BIH     JIR Squlpped (NO   JBH     TIR Operational (Verify the REC LED is green) [YES]     Headlight Operating[YES]   EKB     Headlight Operating[YES]   WCH     Where Mounted[CAB   WCH     Number of Trumpets Forward [4 FORWARD   Number of Trumpets F
Fill in all answers for questions regarding this task.   Reason for Report[PERSONAL INJURY   BECZ   BECZ   BEVEN Recorder Download Taken[YES]   BH
Reason for Report[PERSONAL INJURY
2.   Event Recorder Download Taken[YES]   JBH     TIR Equipped [NO]   JBH     TIR Operational (Verify the REC LED is green) [YES]     4.   Ditchlights Operating[YES]   EKB     Headlight Operating[YES]   WCH     Where Mounted[CAB
TIR Equipped [NO ]
### TIR Operational (Verify the REC LED is green) [YES] ### Ditchlights Operating[YES] ### Rear Headlight Operating[YES] ### Rear Headlight Operating[YES]  ### Rear Headlight Operating[YES]  ### Rear Headlight Operating[YES]  ### Morn Operating [YES]  ### Worn Mounted[CAB
### Bitchlights Operating [YES]   Rear Headlight Operating [YES]   Rear Headlight Operating [YES]   Rorn Operating [YES]   Number of Trumpets Forward [4 FORWARD   Number of Trumpets Forward [4 FORWARD   Number of Trumpets Rear [1 REAR   Number of Trumpets forward, 2 reverse is model K-5LA-R24   1 trumpet forward, 4 reverse is model K-5LA-R1L   2 trumpets forward, 1 reverse is model K-5LA-R1L   2 trumpets forward, 1 reverse is model K-5LA-R1L   2 trumpets forward, 1 reverse is model K-5LA-R1L   WCH   Cab Floor Condition [GOOD   WCH   Windows Condition [GOOD   WCH   Wordshield Wipers Operating [YES]   WCH   Crossing Bell (PNEUMATIC   WCH
Headlight Operating [YES] Rear Headlight Operating [YES]  5. Horn Operating [YES]  WCH  Where Mounted [CAB  Number of Trumpets Forward [4 FORWARD  Number of Trumpets Rear [1 REAR  As information:  3 trumpets forward, 2 reverse is model K-5LA-R24  1 trumpet forward, 4 reverse is model K-5LA-R1L  2 trumpets forward, 1 reverse is model K3HA-R2  6. Air Brake Departure Test Completed [YES]  WCH  7. Cab Floor Condition [GOOD]  Windows Condition [GOOD]  Windows Condition [GOOD]  Windows Condition [GOOD]  Windshield Wipers Operating [YES]  8. Crossing Bell Operating [YES]  9. Handbrake Operational [YES]  9. Handbrake Operational [YES]  10. Sand Condition [DRY]  Sand Level Front [PARTIAL EMPTY]  Sand Level Rear [PARTIAL FULL]  Sanders Operational [YES]  Normal Sand Flow to Rail [YES]  11. Brake Shoes Condition [GOOD]  WCH
Rear Headlight Operating [YES]   WCH
More Mounted[CAB   Number of Trumpets Forward [4 FORWARD   ]   Number of Trumpets Rear [1 REAR   ]   As information:
Where Mounted[CAB
Number of Trumpets Rear [1 REAR
As information:  3 trumpets forward, 2 reverse is model K-5LA-R24  1 trumpet forward, 4 reverse is model K-5LA-R1L  2 trumpets forward, 1 reverse is model K3HA-R2  6. Air Brake Departure Test Completed [YES_]  Cab Floor Condition[GOOD_]  Cab Seats Condition[BAD_]  Mirrors Condition[GOOD_]  Windows Condition[GOOD_]  Windows Condition[GOOD_]  Windshield Wipers Operating [YES]  8. Crossing Bell Operating [YES]  Crossing Bell [PNEUMATIC_]  Where Mounted[CONDUCTOR SIDE_]  9. Handbrake Operational[YES]  10. Sand Condition[DRY]  Sand Level Front[PARTIAL EMPTY_]  Sand Level Rear[PARTIAL FULL_]  Sanders Operational[YES]  Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_]  Brake cylinder travel by individual cylinder  WCH
3 trumpets forward, 2 reverse is model K-5LA-R24 1 trumpet forward, 4 reverse is model K-5LLA-R1L 2 trumpets forward, 1 reverse is model K3HA-R2  6. Air Brake Departure Test Completed [YES_] WCH  7. Cab Floor Condition[GOOD_]
1 trumpet forward, 4 reverse is model K-5LLA-R1L 2 trumpets forward, 1 reverse is model K3HA-R2  6. Air Brake Departure Test Completed [YES_]
2 trumpets forward, 1 reverse is model K3HA-R2  6. Air Brake Departure Test Completed [YES_] WCH  7. Cab Floor Condition[GOOD_] WCH  Cab Seats Condition[BAD_]  Mirrors Condition[GOOD_]  Windows Condition[GOOD_]  Windshield Wipers Operating [YES]  8. Crossing Bell Operating [YES] WCH  Crossing Bell [PNEUMATIC_]  Where Mounted[CONDUCTOR SIDE_]  9. Handbrake Operational[YES] WCH  Sand Condition[DRY] WCH  Sand Level Front[PARTIAL EMPTY_]  Sand Level Rear[PARTIAL FULL_]  Sanders Operational[YES]  Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH  12. Brake cylinder travel by individual cylinder WCH
6. Air Brake Departure Test Completed [YES_]  7. Cab Floor Condition[GOOD_]
7. Cab Floor Condition[GOOD_]
Cab Seats Condition[BAD]  Mirrors Condition[GOOD_]  Windows Condition[GOOD_]  Windshield Wipers Operating[YES]  8. Crossing Bell Operating [YES] WCH  Crossing Bell [PNEUMATIC_]  Where Mounted[CONDUCTOR SIDE]  9. Handbrake Operational[YES] WCH  10. Sand Condition[DRY] WCH  Sand Level Front[PARTIAL EMPTY_]  Sand Level Rear[PARTIAL FULL_]  Sanders Operational[YES]  Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH  12. Brake cylinder travel by individual cylinder
Mirrors Condition[GOOD_] Windows Condition[GOOD_] Windshield Wipers Operating[YES]  8. Crossing Bell Operating [YES] WCH Crossing Bell [PNEUMATIC_] Where Mounted[CONDUCTOR SIDE_]  9. Handbrake Operational[YES] WCH 10. Sand Condition[DRY] WCH Sand Level Front[PARTIAL EMPTY_] Sand Level Rear[PARTIAL FULL_] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH 12. Brake cylinder travel by individual cylinder WCH
Windows Condition[GOOD_] Windshield Wipers Operating[YES]  8. Crossing Bell Operating [YES] WCH Crossing Bell [PNEUMATIC_] Where Mounted[CONDUCTOR SIDE]  9. Handbrake Operational[YES] WCH 10. Sand Condition[DRY] WCH Sand Level Front[PARTIAL EMPTY_] Sand Level Rear[PARTIAL FULL_] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH 12. Brake cylinder travel by individual cylinder
Windshield Wipers Operating [YES]  8. Crossing Bell Operating [YES] WCH
8. Crossing Bell Operating [YES] WCH Crossing Bell [PNEUMATIC_] Where Mounted[CONDUCTOR SIDE]  9. Handbrake Operational[YES] WCH 10. Sand Condition[DRY] WCH Sand Level Front[PARTIAL EMPTY_] Sand Level Rear[PARTIAL FULL_] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH 12. Brake cylinder travel by individual cylinder WCH
Crossing Bell [PNEUMATIC_] Where Mounted[CONDUCTOR SIDE]  9. Handbrake Operational[YES] WCH  10. Sand Condition[DRY] WCH  Sand Level Front[PARTIAL EMPTY_] Sand Level Rear[PARTIAL FULL_] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH  12. Brake cylinder travel by individual cylinder WCH
Where Mounted[CONDUCTOR SIDE]  9. Handbrake Operational[YES] WCH  10. Sand Condition[DRY] WCH  Sand Level Front[PARTIAL EMPTY] Sand Level Rear[PARTIAL FULL] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD] WCH  12. Brake cylinder travel by individual cylinder WCH
9. Handbrake Operational[YES] WCH 10. Sand Condition[DRY] WCH  Sand Level Front[PARTIAL EMPTY_] Sand Level Rear[PARTIAL FULL_] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH 12. Brake cylinder travel by individual cylinder WCH
10. Sand Condition[DRY] Sand Level Front[PARTIAL EMPTY_] Sand Level Rear[PARTIAL FULL_] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] Brake cylinder travel by individual cylinder  WCH
Sand Level Front[PARTIAL EMPTY_] Sand Level Rear[PARTIAL FULL_] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] Brake cylinder travel by individual cylinder  WCH
Sand Level Rear[PARTIAL FULL ] Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD ] WCH  12. Brake cylinder travel by individual cylinder WCH
Sanders Operational[YES] Normal Sand Flow to Rail[YES]  11. Brake Shoes Condition[GOOD_] WCH  12. Brake cylinder travel by individual cylinder WCH
Normal Sand Flow to Rail(YES)  11. Brake Shoes Condition[GOOD_] WCH  12. Brake cylinder travel by individual cylinder WCH
11. Brake Shoes Condition[GOOD_] 12. Brake cylinder travel by individual cylinder  WCH  WCH
12. Brake cylinder travel by individual cylinder WCH
Tal 13.5"
L2 [3.5"]
L3 [3.5"]
L4 [>3.5"]
R1 [3.5"] R2 [3" ]
R3 [>3.5"] R4 [>3.5" ]
TOTAL COLUMN TO THE COLUMN TO
13. Note any repairs made: WCH
14. Manager /Supervisor signoff that all steps have been completed for <u>ECZ</u>
14. Manager /Supervisor signoff that all steps have been completed for
REVIEW WHEEL REPORT
Review wheel report for compliance to LMI 5202 and LMI 5211.
If wheels do not meet criteria, by showing blue or red in
wheel report, add True Wheel Set task or Change Traction
Motor task and arrange to change or true wheels.
1. Manager must sign-off this task if you are not going to  True Wheels or Change Motor, if wheels do not meet company
specifications.

### SERVICE TRACK:SV PIT

## TEST AIR DRYER 01

Standard Work Task

994 AIR DRYER TROUBLESHOOTING

This task utilzes the air dryer power analyzer tool (724-7785) to determine the status of the power supply and verify cycling

- Preparation
  - 1) Secure locomotive. Ensure handbrake is applied.
- Test air dryer
  - 1) Disconnect power cable from air dryer
  - 2) Connect analyzer cable to air dryer
  - 3) Connect power cable from locomotive to analyzer
  - 4.1) With air dryer analyzer connected and test switch in "OFF" position. The "Supply Voltage Normal" light should be on. The "Intermittent Voltage On" light should be on ONLY when the air compressor is pumping.
  - 4.2) If any other light is on, troubleshoot air dryer power supply
  - 5.1) Troubleshoot air dryer power supply (if necessary)
  - 6) Switch analyzer to "ON" position to begin air dryer cycling
  - 7.1) Verify air dyer cycling

Listening to the dryer as it exhausts air is the best way to determine if it is cycling properly. 975 and 994 air dryer cycles are slightly different.

- 7.3) 994 Air Dryer: Loud burst and 48 seconds steady blow tower #1, 17 seconds nothing, loud burst and 48 seconds steady blow tower #2, 17 seconds nothing, repeat.
- 8) Verify air dryer cycling after repairs Disconnect analyzer and reconnect power cable to air dryer after verification

## REPAIR BOX, MU WIRING

STEP 0

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### SERVICE TRACK:SV PIT RN VERIFY OPERATION RCL SAFETY FEATURES When an RCL Locomotive is released from shop a functional test of the RCL system should be performed. These tests do not require movement of the locomotive. These tests are intended to test the operation of the locomotive only. Depending on the type of repairs completed, additional test involving locomotive movement may be required. The "911" tones are verified audibly for now. Soon, A Touch-Tone Decoder is used to verify "911" mandown message. RNFunctional Air Brake Test for RCL Equipped Locomotives Set Up Locomotive Refer to LMI 7912 for CCB26 Linking Instructions (Gensets) Step Action Establish Blue Signal protection and set handbrake. 1 Perform manual air brake test as outlined in LMI 0012. Verify that the locomotive radio is installed and cable 3 from RCL system is applied to the radio's auxiliary connector. Set channel on locomotive radio and monitor radio to unused chanel for testing, Set up locomotive as follows: Apply Locomotive in RCL warning tag to control stand. Set Isolation Switch to Isolate. Set air brake equipment to Lead, Cut in. Turn On RCL circuit breaker. Changeover Switch to RCL. If required, set changeover valve to RCL position. 5 Link RCT. Verify that the test message is broadcast over the 6 locomotive radio. 7 Verify both amber strobe lights on locomotive cab are flashing. Test RCL Independent Brakes RN 2. Ensure: RCT Independent Override Selector is in Release position. RCT Automatic Brake Selector is in Release position. NOTE: BELL WILL RING WHEN PERFORMING THIS TEST. VERIFY THAT ISOLATION SWITCH IS IN ISOLATE. Action Step 1 Place RCT reverser in either Forward or Reverse. 2 Press vigilance button on RCT. When the speed selector is moved to Couple, the bell will 3 ring. Verify that Independent brakes release (0 psi). 4 Move Speed Selector to Stop. Verify that independent brakes apply. Verify brake cylinder 6 pressure is full application: 45 psi for clasp arrangement typical; 72 psi for single shoe arrangement typical. 7 Place RCT reverser in Neutral. NOTE: CANAC Beltpack allows 20 seconds for this test. After 20 seconds a full independent brake application will occur. RN Test RCL Automatic Brakes 3. Ensure: RCT Independent Brake Override Selector is in Release position. RCT Automatic Brake Selector is in Release position. RCT is in Neutral. Speed Selector is in Stop. Step Action Advance Automatic Brake Selector through each position pausing at each to allow pressures to stabilize.

**UPY 609** 

NZ021

### UPY 609 LUBE OIL SAMPLE

## SERVICE TRACK:SV PIT Setting Reduction Brake Pipe Pressure +/- 3 PSI Release 0 90 Minimum 7 psi 83 psi Light 10 psi 80 psi Medium 15 psi 75 psi Full 20 psi 70 psi Return Automatic Brake Selector to Release -BP should return 90 psi. NOTE: Auto bail feature should bail applications only in the minimum and light settings from automatic brake reductions. Medium and full setting should result in full independent brake cylinder pressure (45 psi or 72 psi depending on J valve). RNTest RCL Emergency Brake Ensure: RCT Independent Brake Override Selector is in Release position. RCT Automatic Brake Selector is in Release position. RCT Reverser is in Neutral. RCT Speed Selector is in Stop. Step Action Place Independent Brake Override Selector into Emergency position. Verify Brake pipe pressure rapidly falls to 0 psi. Verify Brake Cylinder pressure rises to 72-80 psi (43-48 psi on locos with clasp arrangement composition shoes - J16B relay valve). To recover from emergency: Wait 30 to 50 seconds. Press Vigilance button on RCT. Move Independent Brake Override Selector to Release position PCS will reset and brake pipe pressure will recharge to Push RCL Emergency Shut Down button on side of locomotive. 3 Verify Brake pipe pressure rapidly falls to 0 psi. Verify Brake Cylinder pressure rises to 72 - 80 psi (43-48 psi on locos with clasp arrangement composition shoes - J16B relay valve. To recover from pushed Emergency Shut Down button comanded 4. Emergency: Pull out Emergency Shut Down button (if maintained contact Push the reset button on the RCR (Cattron only). Move Independent Brake Override selector to the Emergency position. Press Vigilance button on RCT. Move Independent Brake Override selector back to the release position. PCS will now reset and brake pipe pressure will recharge to 90 psi. RΝ Test RCL Vigilance Timeout Test

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NOTE: BELL WILL RING WHEN PERFORMING THIS TEST.

SERVICE TRACK:SV PIT VERIFY THAT ISOLATION SWITCH IS IN ISOLATE. 5. Ensure: RCT Independent Brake Override Selector is in Release position. RCT Automatic Brake Selector is in Release position. RCT Reverser is in Neutral. Step Action Place RCT reverser in either Forward or Reverse. 1 Press vigilance button on RCT. Place Speed Selector in Coast. Crossing bell will ring. 3 Verify that after approximately 50 seconds, vigilance expires, alarm expires, and a full service brake application occurs. RN Verify Headlight Operation Set up headlight switches on locomotive before performing this test. Place RCT in Neutral. Verify both headlights are in "dim". 1 Place RCT reverser in Forward; then press headlight switch 2 once for "bright". Forward headlight should now be bright. Press headlight switch again for "off." Check for headlight "off." Then press headlight switch again to return to "dim" Place RCT reverser in Reverse and repeat step 2 above for the reverse headlight. Verify Man-Down Operation RN1) Use a hand-held radio to monitor the locomotive radio transmissions and find an unused voice radio channel. Set the locomotive and hand-held radios to the unused channel for test. 2) Refer to LMI 7403 to verify the proper operation of the voice radio. Perform the Touch-Tone test to confirm that the Touch-Tone decoder reads all 12 (0-9, \*, and #) digits sent by the voice 3) Place RCT reverser in either Forward or Reverse. Move Speed to stop, verify brakes apply. 4) Press vigilance button on RCT. Key the Hand-Held radio and "UPXXXX Man-Down Test, UPXXXX Man-Down Test, UPXXXX Man-Down Test" 5) Tilt OCU and wait for Man-Down timeout. Wait for the alarm to fully activate since several warning messages may be broadcast before the 911 tones are sent. 6) Confirm that Man-Down Message, including locomotive unit number and "9-1-1" DTMF codes, are broadcast after man-down timeout. Use available Touch-Tone Decoder to verify "911" tones. 7) Key the Hand-Held radio and announce: "UPXXXX Man-Down Test Completed, UPXXXX Man-Down Test Completed, "UPXXXX out" Continue monitoring the channel to respond to someone answering the man-down transmission. 8) Set locomotive voice radio channel back to assigned RCL voice channel. RNVerify Antenna Operation For Each Canac/Cattron or GE RCL Antenna: Use a Bird Model 500 Antenna Tester to verify that the antenna has a SWR reading less than 1.5 at the RCL operating frequency. OR Confirm that the RCL System maintains the OCU to Locomotive Link while driving the RCL Operator/OCU a Distance of 1 mile from the

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RN

At the conclusion of the tests, set up the locomotive for manual

Set Up Locomotive for Manual Operation

locomotive.

## SERVICE TRACK:SV PIT

### operation: Step Action Turn RCT off. Locomotive will go to Full Service application 1

- If equipped, set changeover valve to Manual. 2
- Place the Changeover Switch to Manual. Locomotive will go to 3 Emergency. Set Locomotive Radio Channel back to normal.
- Set up air brake equipment for Lead and recover from Emerg. 4
- Remove Locomotive in RCL warning tag. 5
- Apply full Independent brakes and make a 20 psi BP reduction 6
- 7 Apply handbrake, if required, and secure RCT and reverser per local policy.

SERVICE TRACK:SV REPAIR				
SCRAPE ENGINE VEE				
	Standard Work Task			
1.	Work Prep			
	0.1) Obtain 2" and 4" scrapers, absorbent pads, laser gun to			
	check engine temperature and cardboard box for carbon/oil.			
	0.2) Ensure that handbrake is set, the battery knife switch			
	is pulled and apply lock out device and personal ID tag to			
	lockout device			
	0.3.1) Prep Engine for Work			
	Check left side of engine to ensure temperature is less than 120			
	degrees Fahrenheit.			
	0.3.2) Check right side of engine to ensure temperature is less			
	than 120 degrees Fahrenheit.			
	0.3.3) Apply platform to stand on			
2.	Clean /Scrape Engine Vee			
	1.1) Use absorbent pads to soak up any standing oil			
	1.2) Pick up any hardware such as nuts or bolts that are in the			
	engine vee			
	1.3) Scrape the vee out. Be sure to scrape area between the top			
	deck and the exhaust manifold Repeat for all areas of the vee. Be sure to get between the legs			
	of the exhaust stacks.			
	1.4) Ensure drain is clear of obstructions and will drain engine			
	vee			
3.	Clean Up			
э.	2.1) Wipe off scrapers with absorbent pads			
	Scrapers must be cleaned before they are given back to the tool			
	room			
	2.2) Put platform back in its proper place			
	Make sure that test cock bolts are replaced if platform is of the			
	platform is of the type that hangs from these.			
	2.3) Remove blue tag and battery switch lock out device			
CHANG	E CAB SEAT CAB02			
1.	Seat			
	Change seat per OEM Maintenance Manual			
	<pre>Verify brand of seat and base style: [_]</pre>			
CHANG	E CAB SEAT ENGR01			
1.	Seat			
	Change seat per OEM Maintenance Manual			
	Verify brand of seat and base style: [_]			
CHANG!	E AIR DRYER HUMIDITY EYE			

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STEP 0

4/26/2020 3:36:10PM

## SERVICE TRACK:SV REPAIR ADJUST LUBE OIL, ENGINE Standard work task Check engine lube oil level 1) Ensure engine is idling 2) Locate engine lube oil dipstick. GE and EMD have different locations 3) Remove engine lube oil dipstick 4) Clean engine lube oil dipstick. Use Wypall (UP# 220-5539) or towel 5) Insert engine lube oil dipstick. Wait one minute 6) Remove engine lube oil dipstick 7.1) Read indicated measurement. Look at oil level on dipstick 7.2) If oil level is between "Full" and "Add" marks on dipstick, proceed to Step 1.1 for GE Step 2.1 for EMD 7.3) If oil level indicates "Full", the task is complete CLEAN TRAP, CARBON ALL01 STEP 0 CHANGE CENTER STEP, LOCOMOTIVE LF 712-7155 is Right Front and Left Rear. 712-7153 is Left Front and Right Rear. REPAIR COVER, MU RECEPTACLE 01 Repair or replace MU Cover as necessary. EKB CHANGE LIGHT BULB, CAB 01 STEP0

STEP 0
REPAIR TRACTION MOTOR LEADS 03

CHANGE LIGHT SWITCH 01

Standard Work task

NOTE: Best practice to use cleats for cable spacing.
Do NOT bundle so that the leads rub against each other or the car body. Use 715-4128 or 715-6721 for AC TM.
Use 712-0022 for DC TM.

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### SHOP:SHOP INBOUND

# TAKE LUBE OIL SAMPLE(Federal)

WCH

Standard Work Task

Prepare sample bottles

- 0.1) Write RR initials, unit number, date, location, and mark "Eng Oil" on bottle labels.
- 1. Collect samples

WCH

Take a 3 oz. engine lube oil sample

- Inspect oil sampling tap. Use caution when opening carbody doors.
- 1.2) EMD: Inspect Michiana door for tap: 1/4" close nipple (323-3506) and 1/4" male hansen fitting (190-6191). If not present, install
- 2.1) Take oil sample. Apply fitting and purge first.
- 2.2) Fill bottle 3/4 full (for 4 oz. bottle)
- Test samples

WCH

- 1.1) Test oil for water. Hot plate set at 392 degrees F (200 C).
- 1.2) Perform crackle test. Pour quarter sized pool of oil on hot
   plate & listen for crackle. Water in Sample [N]
- 2.1) Test oil for fuel. Ensure sniffer is calibrated. If not, use calibration fluid from lab.
- 2.2) Ensure bottle is at room temperature and is 3/4 full.
- 2.3) Sniffer should seal against bottle top.
- 3) Press start button on sniffer to begin test and allow 3 to 5 minutes to test. Fuel dilution [0%]
- 4) Ensure that the sample lids are tight and wipe any fluid or dirt from the sample bottles.
- 5) All samples must be shipped within 24 hours of extraction
- 6.1) Package samples. Place plastic bag PN 280-0510 and insert divider into sample box
- 6.2) Place samples into shipment box, ensuring all sample bottles are upright and neatly packed
- 6.3) Mark each package with the following statement: Chemical ID Number "NA 1993".
- 7) Ship to:

Eurofins ANA Laboratories, Inc.

160 Suite D

9th Avenue

Runnemede, NJ 08078

SHOP:	SHOP INBOUND	_
COMP	LETE LMI 9414(Federal)	_
	Form 9414 Part A - Universal Locomotive Inspection and Maintenance	
	Record. Union Pacific Railroad Company.	
	This form is intended for use where inbound and outbound servicing	
	dictates separating the locomotive daily inspection into separate	
	inbound and outbound processes. In these cases all inbound	
	servicing shall be accomplished using 9414 Part A and all	
	outbound servicing shall be accomplished using 9414 Part B in	
	conjunction with the Outbound Departure Test. Both Part A and	
	Part B must be completed to meet FRA requirements.	
	All items shall be inspected for proper security and operation.	
1.	SAFETY EQUIPMENT	
••	Handrails/Grabirons, Steps, Safety Chains [OK]	_
	Platforms and Walkways [OKl	
	Carbody Doors, Hinges, and Latches [OK]	
	Handbrake [OK ]	
2.	EQUIPMENT OPERATION (MECH)	
2.	Fire Extinguisher, Cab & Engine Room [OK]	_
	Bell, ring 10 times [OK]	
	Horn [OK ]	
	Windshield Wiper [OK]	
	Protective Guards and Covers [OK]	
	Cab Seats and Window Glass [OK ]	
3.	FLUID AND EXHAUST LEAKS	
٠.	Water Leaks [OK]	_
	Oil Leaks [OK ]	
	Fuel Leaks [OK ]	
	Charged Air /Exhaust Leaks [OK]	
4.	FLUID LEVELS	_
••	Engine Lube Oil level [FULL MARK]	_
	Governor Oil Level [OK]	
	Air Compressor Oil Level [OK]	
	Cooling System [FULL ]	
5.	TRUCKS, DRAFT GEAR, UNDERFRAME, AND BRAKES	
· ·	Truck, Draft Gear, & Underframe condition [OK]	_
	Main Reservoir and Blowdown Drains [OK]	
	Air Dryer Humidity Indicator (Eye) Color [SELECT EYE COLOR_]	
	Fuel Cap, Gauge, and Vent Valve [OK]	
	Sander Nozzles and Hoses [OK]	
	MU Air Hoses [OK ]	
	Trainline Air Hose Height Above Rail	
	[OK, >6" ABOVE RAIL]	
	MU Cut-out Cocks and Locks [OK]	
6.	BRAKE SHOES AND RIGGING [OK]	
7.	TRACTION MOTORS, JOURNAL BOXES, AND WHEELS	_
	Traction Motors, Journals, and Wheels [OK]	
8.	CAB SERVICING	_
	Clean Cab, remove trash and debris [OK]	
	First Aid Kit [OK]	
	Graffiti Removed [OK]	
9.	SERVICE TOILET [OK]	
10.	RETENTION TANK EMPTY [EMPTY]	
11.	SAND SERVICING	_
	Sandbox [OK]	
12.	FUEL SERVICING	_
	Fuel Quantity as appropriate [FULL]	
13.	EQUIPMENT OPERATION (ELEC)	_
14.	Indicators, Enunciators and DID Panel [OK] EKB	_
15.	All Interior and Exterior lights [DEF LIGHT BULB(S)]EKB	_
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SHOP:SHOP INBOUND		
16.	Speed Indicator/s [OK]	<u>EKB</u>
17.	Voice Radio System Intact, TX/RX Clearly [OK]	EKB
	(Test radio with Primus "talk back" or Monitor Radio)	
18.	Reverser Handle Interlock [OK]	<u>EKB</u>
19.	Air Conditioner Operation -follow reference LMI 9414-A/C	<u>EKB</u>
	[OK ]	
20.	Air Cond Temp Drop [NOT DONE OUTSIDE LES]	<u>EKB</u>
21,	Heater Operation [OK]	<u>EKB</u>
22.	Inspect Cab Signals Seals [NOT EQUIPPED]	<u>EKB</u>
23.	Cab Signal LCR Cabinet Seal Applied [NOT APPLIED]	EKB
24.	Cab Signal ADU Seal Applied [NOT APPLIED]	<u>EKB</u>
25.	Inspect Cab Signals Receiver Bars [N/A]	<u>EKB</u>
26.	Verify Low Voltage Grounds Clear [OK]	EKB
27.	GPS CKT Breaker Closed and Seal Removed [NOT APPLICABLE]	<u>EKB</u>
28.	Comm Device Circuit Breaker [N/A]	<u>EKB</u>
29.	MU Cables, Covers & Receptacles [MU CVR DEF MIS]	<u>EKB</u>
30.	Traction Motor Electrical [TM LEADS OILY]	<u>EKB</u>
31.	INSPECTION VERIFIED BY [LOCOMOTIVE SERVICED_]	

DEPARTURE: DEPARTURE		
COMPLI	ETE CONSIST OUTBOUND DEPARTURE PLANNING	
	This task should be used by outbound planners once Locomotive	
	position has been identified for use in a consist.	
	* ANSWER YES TO EACH OF THE FOLLOWING QUESTIONS IF TRUE.	
1.	Will this be the Lead Locomotive or Second Leader in the Lead	
	Consist []	
	* Fires COMPLETE AIR BRAKE DEPARTURE TEST - CAB PERSON	
	* Fires COMPLETE AIR BRAKE DEPARTURE TEST - GROUND PERSON	
	* Fires COMPLETE LEAD LOCOMOTIVE CONSIST SET-UP.	
	* Fires CHECK ALERTER	
	* Fires INSPECT DOOR, ENGINE CONTROL CIRCUIT BREAKER	
	* Fires COMPLETE PTC PRE-TRIP TEST	
	* Fires CLEAN CAB INTERIOR	
2.	Will this be a Lead Controlling or Remote Controlling Unit	
	in a DP Consist []	
	* Fires COMPLETE AIR BRAKE DEPARTURE TEST - CAB PERSON	
	* Fires COMPLETE LEAD LOCOMOTIVE CONSIST SET-UP.	
_	* Fires COMPLETE DPU SET-UP, LINK-UP, AND DEPARTURE TEST.	
3.	Will this be a Lead Unit or "Second Leader" Entering CCS/ATC	
	Territory [] * Fires COMPLETE CAB SIGNAL DEPARTURE TEST.	
	* Fires COMPLETE CAB SIGNAL DEPARTURE LEST.  * Fires CHECK ALERTER	
	* Fires VERIFY VOICE RADIO & FOT EQUIP SECOND LEADER	
	* Fires CLEAN CAB INTERIOR	
4	Will this be a mid train DPU without rear controlling DPU []	
4.	* Fires APPLY EOT REPEATER	
COMPLI	ETE OUTBOUND DEPARTURE TEST(Federal)	
COMITE	Form 9414 Part B consolidated Universal Locomotive Inspection	
	and Maintenance Record Union Pacific Railroad Company. This must	
	be completed in conjunction with LMI 9414 Part A. All items	
	should be inspected for proper security and operation.	
1.	LOCOMOTIVE CAB INSPECTION	
1.	Inspect, Clean & Service Cab - Lead Unit []	
	Remove trash all units	
2.	Verify LMI 9414 Part A has been completed.	
3.	Verify Blue Card is Present and Current []	
4.	Locomotive Inspected by: []	
5.	Cab Card Inspection Date: []	
6.	Cab Card Inspection Time:[]	

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6.